



Louisiana Department of Health and Hospitals
Office of Public Health
What is Infectious Disease Epidemiology?



What is Infectious Disease Epidemiology?

The Infectious Disease Epidemiology Section is a section staffed by 20 epidemiologists and support staff who act as disease detectives to track the causes and consequences of infectious diseases.

Purpose

The purpose of the Infectious Disease Epidemiology Section is to study the distribution and determinants of infectious diseases in the community, conducts infectious disease outbreak investigations, institutes disease control measures and coordinates programs that prevent the spread of communicable diseases.

What are the services provided?

1-Tracking of infectious diseases of public health importance. This is the **Surveillance** component of the section. There is a list of diseases that must be reported by all health professionals. This list is set by law. Section epidemiologists look at the number of cases, their location and numerous other characteristics to study the distribution of these diseases and to draw some conclusions that will guide the communicable disease control programs.

2-Investigation of disease outbreaks identified by the surveillance system or those reported by the public or health professionals in order to recommend preventive measures. Common outbreaks investigated are:

- Food-borne diseases
- Vector-borne diseases (encephalitis)
- Hospital-acquired infections
- School and day-care centers
- Nursing home, prisons and other institutions
- Community-acquired infections
- Potential bioterrorist events

3-Implementation of preventive measures based

on information gathered by surveillance and outbreak investigations.

4-Specific programs to

- Promote appropriate use of antibiotics
- Prevent the spread of antibiotic resistance
- Monitors death from infectious diseases
- Prevent hepatitis A cases with immunoprophylaxis
- Coordinate prevention of hepatitis C
- Facilitate development of state plan for hepatitis prevention activities
- Coordinate prevention of seafood related infections with sanitarian services, the seafood industry, Restaurant Association and the Food and Drug Agency
- Prevent invasive diseases (meningococcal and Hemophilus) with chemoprophylaxis
- Provide counseling and recommendations for rabies exposure
- Coordinate prevention of zoonotic diseases with the Louisiana Department of Agriculture Veterinary services and the veterinary community

5-Advice and education for prevention of communicable diseases to the community and health professionals.

6-Surveillance and response to bioterrorism events.

- Set up surveillance for diseases resulting from bioterrorism exposures through the reportable disease surveillance system and syndromic surveillance system in emergency room and emergency medical services
- Set up a communication and reporting system with coroners, infectious disease specialists and dermatologists.
- Participate in bioterrorism response preparedness. In case of a bioterrorism event the Infectious Disease Epidemiology section would have the critical role of providing the medical intelligence necessary to confirm cases, determine isolation, contact identification and follow-up, candidates for chemo or immuno-prophylaxis



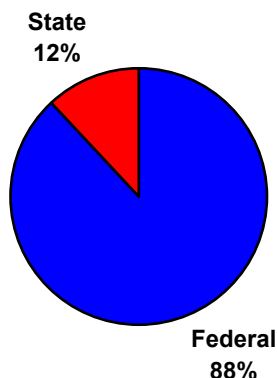
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Who are the recipients of services?

Practically anyone in Louisiana may be a recipient of services. The public benefits from educational campaigns, intervention or prophylaxis and targeted prevention programs. Office of Public Health staff (nurses, sanitarians, administrators), physicians, nurses, infection control practitioners, laboratorians and other health care providers, veterinarians, schools (school nurses) and child care centers, health care institutions, food service organizations, local and state law enforcement officers, Office of Emergency Preparedness officials may receive technical assistance.

Who pays for the Infectious Disease Epidemiology Section?



Program accomplishments

The **surveillance systems** tracking infectious diseases have been expanded to cover all aspects of surveillance. They comprise the following systems:

- Reportable Disease Database (RDD)
- Emergency Department Syndromic Surveillance (EDSS)
- Emergency Medical Service Syndromic Surveillance (EMSSS)
- Rabies Infected Animal Surveillance

- West Nile infection surveillance in humans, horses, birds and mosquitoes (Arbonet)
- Epidemiology Active Surveillance & Epidemiology (EASE) including
 - Flu surveillance
 - Antibiotic resistance
 - Respiratory virus infection
 - Hurricane-related injuries & deaths.
 - Special Needs Shelter
- Antibigram surveillance

Outbreak investigations have been expanded beyond the usual food outbreaks to include arthropod-borne diseases, hospital acquired infections, other infectious disease outbreaks in institutions.

Investigations are carried out by regional teams supported by the section's staff. Regional personnel including Rapid Response Team, staff are regularly trained by the section.

The section maintains **guidelines for the prevention of communicable diseases** in Louisiana through a series of documents available on the Office of Public Health website or on paper format:

- Infectious Disease Control Manual
- Guidelines for the Management of Antibiotic-Resistant Pathogens in Health Care Facilities

Data related to both surveillance and outbreak investigations are analyzed. Feedback is provided to the public and health care providers through the Office of Public Health websites, mass e-mails and publications such the Annual Report of Infectious Diseases and the bi-monthly Louisiana Morbidity Report.

Section epidemiologists are sought after resources to provide lectures, participate in workshops, provide continuing medical education. In 2002 alone 6,200 people participated in 150 presentations.

The section has been involved in all bioterrorism exercises and incidents.



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The section also provides epidemiologic support and guidance for all Office of Public Health programs. Nine regional epidemiologists are supervised by a senior staff member of the section.